Pedicularis cystopteridifolia
Fern-leaf Lousewort
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Meriwether Lewis made the first collection of fern-leaf lousewort on July 6, 1806 along the Blackfoot River in present-day Powell County. Frederick Pursh, an immanent botanist of the day, attached the label to the specimen sheet, which can be found today in the Lewis & Clark Herbarium in Philadelphia. Pursh's label says the plants were collected on July 6, 1806 "on the low plains on the heath [shrubland] of Clarks R." However, there are actually two different species on the specimen sheet. Elephanthead pedicularis (*Pedicularis groenlandica*) is mounted on the specimen sheet and above it in a small packet is plant material from fern-leaf lousewort (*Pedicularis cystopteridifolia*). James Reveal and other prominent present-day botanists who have examined the Lewis and Clark plant collection believe that the label applies to the fern-leaf lousewort specimens. In 1814 Frederick Pursh published a flora of North America called *Flora Americae Septentrionalis* in which he used plants from Lewis's collection to complete floristic descriptions. In that book Pursh says that fern-leaf lousewort was found "On the waters of Clarck's river" and that the plant was nearly two feet high with purple flowers. Not realizing that he had two different species, it is probable that Pursh used both specimens to complete his description, since it would be unusual for fern-leaf lousewort to be two feet high.

On July 6, 1806 Lewis and his small party were along the Blackfoot River in Powell County. On that day, the explorers left their camp near the vicinity of Seaman's [Monture] Creek just west of present-day Ovando and traveled along the Cokahlarishkit [Blackfoot] River valley before camping near what is now Lincoln, Montana. Lewis was on his way to explore the Marias River drainage and Clark was on his way to the Yellowstone River. Wayne Phillips, author of *Plants of the Lewis & Clark Expedition*, points out that Lewis often collected plants with similar features for later comparison. On July 6th, fern-leaf lousewort and elephanthead pedicularis were collected along with Bessey's crazyweed – all of which have purplish flowers in a congested raceme and pinnately divided leaves.

On the day these plants were collected tensions were high because the Nez Perce guides had warned Lewis and his men that they faced danger from enemy tribes along their route. On July 6th, Lewis wrote in his journal, "the trail which we take to be a returning war-party of the Minnetares of Fort de prarie [Atsinas of Saskatchewan, allies of the Blackfoot] becomes much fresher...these plains continue their course S 75 E. and are wide where the river leaves them. up this valley and creek a road passes to Dearbourn's river and thence to the Missouri...we expect to meet with the Minnetares and are therefore much on our guard both day and night."

Fern-leaf lousewort prefers to grow in open meadows and on grassy slopes at mid- to high elevations in the mountains. Its distribution in the world is limited. The species is endemic to Montana and Wyoming, growing only in northern and western Wyoming and southwestern Montana, and nowhere else. The purple flowers are tubular. The upper lip

petal is more hooded and does not have the long, upcurved beak of elephanthead pedicularis. The upper lip petal arches over the three-lobed lower lip. The leaves become progressively smaller as they proceed up the stalk, and are pinnately compound and opposite on the stem. The overall appearance is somewhat ferny. The plants can reach a height of 16 inches. Botanists classify this plant as *Pedicularis cystopteridifolia*, presently placed in the figwort family (Scrophulariaceae), although recent scientific investigations into plant relationships may cause that to change.

The scientific name, *Pedicularis*, pertains to lice. Commonly members of the genus are referred to as louseworts because of the old superstition that if livestock ate these plants they would suffer from an infestation of lice. Members of the *Pedicularis* genus are semi-parasitic and derive part of their nutrition from a host plant.

Although no specific reference to the traditional medicinal use of fern-leaf lousewort can be found, various other species of *Pedicularis* have been used to treat a variety of conditions. Several species have been used for cancer and tumors, as an antidiarrheal and for gastrointestinal problems. Some species have also been used for food by various North American tribes. Contemporary herbalists may use *Pedicularis* spp. as a mild sedative and muscle relaxant.

The Blackfoot Valley is still a great place to find fern-leaf lousewort today. Enjoy an outing to observe Montana's special Lewis and Clark plants that are not only beautiful, but have a unique place in history.